HP ProLiant ML350 G6 Server

Data sheet

processor tower server delivers excellence with performance, expandability, and availability. The ProLiant Onboard Administrator, SmartStart, and HP Systems Insight Manager (SIM) give you ease of management, while the processor and memory upgrades support additional users, thus boosting response times. The HP ProLiant ML350 G6 server addresses your business needs whether you are a small/medium business, a large enterprise, or have remote offices.

Key features and benefits

A more secure foundation

Designed with best-in-class availability features, you can count on the ProLiant ML350 G6 to stay up and running 24x7:

- There is no need to panic if there is a system power, thermal memory, or disk error. The redundant fans, memory, power, and available disk RAID options enable that your system is up and running.

- The ability to upgrade to the second processor enables the capability to upgrade the system memory to 192 GB, and to 16 SFF or 8 LFF hot plug HDD that gives your system architecture the room to grow.

- Serial Attached SCSI (SAS) and Serial Advanced Technology Attachment (SATA) RAID 0/1/10/5/50/6/60 that comes with the HP ProLiant ML350 G6 make storage more reliable, versatile, and affordable.

- Your data is more secure with the TPM (Trusted Platform Module) functionalities that include performing cryptographic functions, creating, and managing keys, while performing digital signature operations.

- You get to plan capacity and power, provision infrastructure consistently, balance physical/virtual resources, while being able to deploy servers quickly and manage them from a remote location as well. All this is made possible by the ProLiant Onboard Administrator.
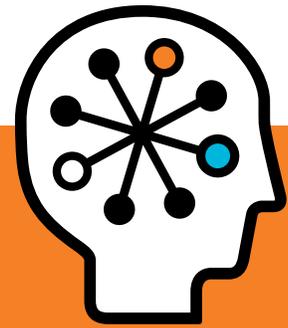
Get a competitive edge with the adaptable and reliable HP ProLiant ML350 G6 server

As enhanced productivity translates into customer satisfaction, it is something that you cannot afford to take for granted. Similarly, you would not want downtime to affect business continuity. So an adaptable, reliable, and expandable infrastructure is a must for your business. The HP ProLiant ML350 G6 server is designed to help you achieve these business imperatives. It comes with the latest Intel® QuickPath Interconnect (QPI) architecture Six-Core, Quad-Core, and Dual-Core processor, serial performance I/O, DDR3 memory, and tools that simplify management. All these features are available at an affordable price, giving your infrastructure the competitive edge in more ways than one. Additionally, the dual

Enterprise-class performance

Combining the latest Intel QPI architecture Six-Core, Quad-Core, and Dual-Core processor, PCI Express Gen 2, and DDR3 memory technology, the ProLiant ML350 G6 provides enterprise-class performance that enables your IT administrators to:

- Get high performance and optimized throughput with advanced ECC and mirroring and with the DDR3, while SAS simplifies cabling up to 16 TB of data storage capacity

- Speed up execution with the Intel ultimate processor with the latest QPI technology and multi-threaded applications

- Take high availability to HDD efficiency with the protection awarded by advanced RAID 0/1/10/5/6/60 with 512 MB BBWC or 1 GB FBWC

- Get increased network throughput and redundancy with the integrated dual gigabit Ethernet

Compatible with virtualized environments

Will this server work in tandem with your virtualized IT infrastructure, you may wonder. Put your fears to rest as the ML350 G6 is a Virtualization ready server system. Compatible with VMware, Microsoft, Red Hat, and Linux your IT administrators get a "single pane of glass" for physical and virtual machine management, through which they can provision, configure, start, stop, delete, relocate, and remotely access virtual machines with keyboard and mouse control. Advantages include:

- Server consolidation

- Resource management and high availability

- Cost reduction

- Business continuity through improved disaster recovery solutions

Ease of management with HP Systems Insight Manager and HP Integrated Lights-Out 2 management processor

Tools like HP Systems Insight Manager, ProLiant Onboard Administrator (powered by the HP Integrated Lights-Out 2 management processor), and the ProLiant Essentials software ICE help reduce downtime and improve productivity. In fact, the ProLiant Onboard Administrator is a key enabling element for the Insight Control and Insight Dynamics. Insight Dynamics enables advanced management that includes planning capacity and power, consistently provisioning infrastructure, and balancing physical/virtual resources. Correspondingly, Insight Control facilitates essential management that helps IT administrators to deploy servers quickly, proactively manage performance control from anywhere, and optimize power confidently. This is referred as unified management across the server infrastructures for better business outcome. Forming the core of ProLiant manageability, the ProLiant Onboard Administrator helps you:

- Get hassle-free set up, health monitoring, and remote administration with the ProLiant Onboard Administrator (powered by the HP Integrated Lights-Out 2 management processor). You can also access the ProLiant Onboard Administrator remotely through a Web browser.

- Enjoy the power and thermal control features that help you get a peek into the power usage pattern of your IT architecture, thus helping you regulate power supply in your IT architecture. The Dynamic Power Capping feature enables enhanced utilization of power and cooling capacity, which controls the total power consumption for a fix power input in a rackmount.

- Benefit from the SmartStart (included in the ProLiant Essentials Foundation shipped with the ML350) and get the server up and running in three easy steps. It provides a stable and reliable configuration for all ProLiant ML and DL 300, 500, and 700 series and BladeSystem (BL) servers.

- Take advantage of the HP SIM and get your staff to concentrate on priority projects. You can also receive alerts on system status.

Adaptable and reliable

Intense competition and ever changing business landscape underscore the need for you to have an infrastructure that is reliable and adaptable. The ProLiant ML350 G6 helps you achieve that by:

- Choosing processor and memory upgrades that support additional users and boost response times

- Opting for the ProLiant ML350 G5 rack when physical location needs change

- Incorporating tape backup solutions to protect business data

- Attaching a wide array of external storage and backup devices as data storage needs increase

- Offering redundancy for power supply and fans for reliability

- Enforcing HP strict worst-case scenario environment testing processes for quality

Energy efficient—Sea of Sensors

The **HP Sea of Sensors** technology enhances server performance while reducing energy usage and expense. Achieve up to 90 percent[1] reduction in power usage at the server level with the HP Sea of Sensors—the heart of HP Thermal Logic technologies. It automatically tracks thermal activity across the server through a collection of up to 32 smart sensors. These sensors dynamically adjust system components such as fans, memory, and input/output processing to optimize system cooling. In other words, the HP Sea of Sensors makes intelligent decisions about how much cooling is needed for the server to perform efficiently.

[1] Energy efficiency based on HP testing.

Technical specifications	HP ProLiant ML350 G6 Server

Processor type	Intel® Xeon® 5600 and 5500
Available Processors	**Six-Core Processors** Intel® Xeon® Processor X5670 (2.93 GHz, 12 MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3/4/4) Intel® Xeon® Processor X5660 (2.80 GHz, 12 MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3/4/4) Intel® Xeon® Processor X5650 (2.66 GHz, 12 MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3/4/4) **Quad-Core Processors** Intel® Xeon® Processor X5570 (2.93 GHz, 8 MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3) Intel® Xeon® Processor X5560 (2.80 GHz, 8 MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3) Intel® Xeon® Processor X5550 (2.66 GHz, 8 MB L3 Cache, 95W, DDR3-1333, HT, Turbo 2/2/3/3) Intel® Xeon® Processor E5640 (2.66 GHz, 12 MB L3 Cache, 80W, DDR3-1066, HT, Turbo NA/NA/1/1/2/2) Intel® Xeon® Processor E5630 (2.53 GHz, 12 MB L3 Cache, 80W, DDR3-1066, HT, Turbo NA/NA/1/1/2/2) Intel® Xeon® Processor E5620 (2.40 GHz, 12 MB L3 Cache, 80W, DDR3-1066, HT, Turbo NA/NA/1/1/2/2) Intel® Xeon® Processor E5540 (2.53 GHz, 8 MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2) Intel® Xeon® Processor E5530 (2.40 GHz, 8 MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2) Intel® Xeon® Processor E5520 (2.26 GHz, 8 MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2) Intel® Xeon® Processor E5507 (2.26 GHz, 4 MB L3 Cache, 80W, DDR3-800) Intel® Xeon® Processor E5506 (2.13 GHz, 4 MB L3 Cache, 80W, DDR3-800) Intel® Xeon® Processor E5504 (2.00 GHz, 4 MB L3 Cache, 80W, DDR3-800) Intel® Xeon® Processor L5630 (2.13 GHz, 12 MB L3 Cache, 40W, DDR3-1066, HT, Turbo NA/NA/1/1/2/2) Intel® Xeon® Processor L5520 (2.26 GHz, 8 MB L3 Cache, 60W, DDR3-1066, HT, Turbo 1/1/2/2) Intel® Xeon® Processor L5506 (2.13 GHz, 4 MB L3 Cache, 60W, DDR3-800) **Dual-Core Processors** Intel® Xeon® Processor E5503 (2.00 GHz, 4 MB L3 Cache, 80W, DDR3-800) Intel® Xeon® Processor E5502 (1.86 GHz, 4 MB L3 Cache, 80W, DDR3-800)
Processor core	Dual, Quad, Six
Cache memory	4 MB, 8 MB, 12 MB
Maximum processor speed	1333 MHz
Multi-processor	1 or 2
Memory type	PC3-6400/8500/10600 (DDR3 800/1066) Registered or Unbuffered Memory
Standard memory	4 GB for Entry model, 6 GB for Base model, 12 GB for Performance model
Maximum memory	192 GB DDR3 Registered Memory 48 GB DDR3 Unbuffered Memory
Memory slots	18 Slots
Maximum internal storage	16 TB
Advanced memory protection	Advanced ECC, Mirroring
Storage type	Hot Plug 3.5-inch SAS, Hot Plug 3.5-inch SATA Hot Plug 2.5-inch SAS Hot Plug 2.5-inch SATA
Removable media bays	5 (1 for DVD ROM)
Expansion slots	1 x PCI Express Gen 2 x16 (x8 speed) 1 x PCI Express Gen 2 x8 (x8 speed) 4 x PCI Express Gen 2 x8 (x4 speed) Optional: 2 x PCI-X 100 MHz (replaces 1 x PCI Express slot)
Storage controller	HP Smart Array P410i SAS/SATA controller (integrated)
Form factor	5U Tower
Networking	Embedded NC326i PCI Express Dual Port Gigabit Server Adapter HP NC382T PCI Express Dual Port Multifunction Gigabit Server Adapter HP NC522SFP Dual Port 10GbE Server Adapter
Remote management	HP Onboard Administrator (embedded) HP Insight Control suite (ICE) HP System Insight Manager HP Foundation Pack
Operating systems supported*	Microsoft® Windows® Server 2003/R2 Microsoft® Windows® Server 2008 Microsoft Windows Smalls Business Server 2008 and Microsoft Windows Essential Business Server 2008 Windows Server 2008 Hyper-V Novell NetWare Red Hat Enterprise Linux SUSE Linux Enterprise Server VMware ESX Citrix XenServer Red Hat and SLEX Xen
Redundant power supply	Optional
Redundant fans	Optional
Warranty (parts/labor/onsite)	3-year/3-year/3-year

*For a complete list of supported operating systems, visit: **www.hp.com/go/ossupport**

Ideal environments and applications

Growing businesses

Easy on your pocket, the HP ProLiant ML350 G6 server's modular chassis provides both the flexibility to deploy in a tower or rack environment, and the ability to expand—you can add a second processor, additional hard drive space, more memory, and more storage.

Remote and branch office deployment

Security is the key issue in remote and branch office deployments. HP Onboard Administrator provides more secure and dedicated remote management, and control for communicating with the head office. In addition, the Trusted Platform Module (TPM) functionalities make your data more secure.

Midmarket and entry enterprise

The 2.66GHz, Six-core with 12 MB cache, and 6.4GT/s QPI technology with Turbo mode, coupled with advanced RAID protection makes it an ideal choice for highly available environments. In addition, the redundant power and fan maintain the system's performance, therefore reducing downtime. Also, where HP Systems Insight Manager enhances system health and uptime, HP Insight Control suite delivers comprehensive system health monitoring, remote control, vulnerability scanning, and patch management, as well as flexible deployment, virtual machine management, and power management in one easy to install package.

HP Financial Services

HP Financial Services provides innovative financing and financial asset management programs to help you cost-effectively acquire, manage, and ultimately retire your HP solutions. For more information on these services, contact your local HP representative, or visit: **www.hp.com/go/hpfinancialservices**

For more information

For more information about the HP ProLiant ML350 G6 server contact your local HP representative, or visit: **www.hp.com/servers/proliantml350-g6**

HP Services

When technology works, business works.
The challenge of virtually every IT organization is similar: to develop and maintain an agile, efficient server infrastructure that delivers the service levels your business needs. HP Technology Services offer a comprehensive portfolio of HP Care Pack Services to help design, deploy, manage, and support your IT environment, enabling cost-effective upgrades to standard warranty with easy-to-buy, easy-to-use support packages.

Minimum Recommended HP Care Pack offerings
- Three-year, 4-hour response onsite 24-hour x 7-day hardware support
- Server Installation and Startup service

Enhanced service level Care Pack offerings
- Three-year Support Plus 24: 24-hour x 7-day coverage, integrated hardware and software OS support
- Three-year, Proactive Select delivers flexibly priced consultancy portfolio

Benefit from HP Care Pack Services helping you:
- Reduce deployment time and manage ProLiant server solutions smoothly and efficiently
- Increase uptime and performance of server availability to your business
- Detect, diagnose, and repair problems to quickly save time, money, and resources

For more information, visit:
www.hp.com/services/proliantservices or

www.hp.com/go/proliant/carepack

Get connected
www.hp.com/go/getconnected

Current HP drivers, support & security alerts delivered directly to your desktop

Technology for better business outcomes

To learn more, visit www.hp.com/servers/proliantml350-g6